

October 27, 2020

Victim Witness Coordinator
United States Attorney's Office
Northern District of California
450 Golden Gate Ave.
San Francisco, CA 94102

Re: Victim Impact/Loss Statement of Micron Technology, Inc.
US District Court for Northern District of California Case No. 3:18-CR-00465-MMC

Dear Sir or Madam,

I write on behalf of Micron Technology, Inc. ("Micron"), the victim of the criminal misconduct of United Microelectronics Corporation ("UMC"). We understand that UMC seeks to plead guilty to a single count of theft of trade secrets under 18 U.S.C. § 1832(a)(3) and has agreed to provide the Government substantial assistance regarding the theft of trade secrets from Micron by UMC and Fujian Jinhua Integrated Circuit Co., Ltd. ("Jinhua"). Micron does not oppose the plea agreement because UMC is guilty of criminal trade secret theft and has committed to provide substantial assistance in this matter in the future. UMC's plea may help resolve this case, and it brings Micron one step closer to full and final justice.

At the same time, UMC's plea and the \$60 million fine UMC has agreed to pay to the government neither makes Micron whole, nor does it fully recognize the gravity of UMC's misconduct. Indeed, UMC's plea is noteworthy because, in Taiwan, it has already been convicted of a far more extensive criminal scheme and far more extensive acts of misappropriation against Micron.

While UMC admits that it is guilty of criminal trade secret theft, the plea agreement defers to the civil case any restitution for the enormous harm UMC has caused to Micron. And the plea agreement does nothing to address the rightful ownership of the patents disclosing stolen Micron trade secrets. UMC and its corporate co-defendant, Jinhua, continue to file for and obtain U.S. patents on the same technology that UMC stole from Micron. For all these reasons, it is crucial that the civil case resume immediately and proceed with urgency.

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Micron is a global leader in memory and storage solutions and is one of the world's leading producers of Dynamic Random-Access Memory ("DRAM") chips, the primary high-speed data storage component of most computers, cell phones, tablets and many other electronic systems. Founded 42 years ago, Micron is headquartered in Idaho with a facility in Northern California that employs the executive leadership of the company and the business units that market Micron's DRAM products. Micron has locations worldwide including in Taiwan – home of Micron's subsidiary, Micron Memory Taiwan Co., Ltd. ("MMT"), and Micron is the only DRAM producer based in the United States.

Through decades – and tens of billions of dollars – of investment in R&D and manufacturing technology, Micron has developed multiple generations of DRAM. Those DRAM products are highly complex integrated circuits that store digital information and provide for its high-speed retrieval, and Micron’s trade secret DRAM processes and design technologies are among its most valuable assets. Micron’s DRAM “design rules” – the trade secret information UMC admits to stealing in its plea agreement – are just one example. Those design rules enable circuit engineers to design and develop DRAM by detailing the constraints of the proprietary process technology used to produce the chips. (For example, the design rules define the minimum size of features and the minimum separation between two features that the process technology will permit.) Yet the evidence is overwhelming that UMC stole far more than design rules. One of UMC’s highest-ranking executives – co-defendant Stephen Chen – directed UMC’s continued use of a cache of **more than 20,000** stolen Micron files throughout UMC’s purported “technology development” for co-defendant Jinhua. As reflected in the Indictment – which focuses on only eight such trade secrets – the value of the stolen IP ranges from “at least **\$400 million and up to \$8.75 billion**, including expenses for research and design and other costs of reproducing the trade secrets.” (Indictment, ¶ 15) (emphasis added).

Contrary to UMC’s prior suggestions, this was not the work of a few rogue employees. UMC’s criminal scheme reflected company policy at the highest levels. Beginning at least as early as 2015, UMC developed and set in motion a plan to induce management and employees from Micron’s Taiwanese subsidiary MMT to misappropriate Micron trade secrets and deliver those trade secrets to UMC. Central to UMC’s criminal scheme was its recruitment of Stephen Chen. UMC hired Chen, who had been in charge of producing Micron’s 25nm DRAM products at its fabrication facility in Taiwan. UMC appointed Chen as its Senior Vice President.

Working through Chen and others, UMC then recruited MMT process engineers J.T. Ho and Kenny Wang, because they possessed in-depth knowledge of Micron’s proprietary DRAM technology and had access to highly confidential documents that describe it. In a deposition in the civil case, Ho admitted that he had stolen more than 20,000 confidential Micron files. When UMC’s IT department discovered the stolen Micron files on Ho’s USB device and brought them to Chen’s attention, Chen himself authorized the issuance of special USB-enabled laptops to Ho and others and directed them to use those laptops to access and consult the Micron files while carrying out their work with Jinhua.

In tandem with that colossal theft, UMC also persuaded Kenny Wang to disclose Micron’s trade secrets to UMC even before Wang departed MMT. Forensic analysis confirms that Wang downloaded over 1,200 confidential Micron files and repeatedly accessed Micron’s Research & Development CAD system – all during his last days at MMT and long after he accepted the job offer to work on UMC’s DRAM project. UMC’s sentencing memorandum suggests that Wang misappropriated a single document, used it in a manner that was ultimately inconsequential, and that UMC as a corporation had negligible involvement. That suggestion defies the facts and greatly understates UMC’s culpability.

Nor is UMC’s misconduct limited to the past. In perhaps its most brazen misappropriation of Micron’s trade secrets, UMC has used and continues to use stolen Micron trade secrets to file for U.S. patents in the names of UMC and Jinhua.

The misappropriation scheme enriched UMC in many ways:

- UMC stole intellectual property that cost Micron billions of dollars to produce, unjustly enriching UMC in that amount at Micron's expense; and
- UMC entered a "Cooperation Agreement" with co-defendant Jinhua, valued in excess of \$700 million USD – including \$400 million in cash payments to UMC and Jinhua's purchase for UMC of \$300 million in high-tech manufacturing equipment. (The plea agreement references only a part of this total consideration.)

Even worse, UMC has used the plea agreement itself to reap even greater rewards. UMC's announcement of its plea agreement – which failed to mention that it has not paid any restitution to Micron yet – led to a spike in UMC's market capitalization of more than \$1 billion.

Assessment and imposition of restitution to Micron is neither incalculable nor complex. Micron's civil claims, including claims brought under the Defend Trade Secrets Act, provide the framework for a civil litigation award of restitution in the form of unjust enrichment and damages. As a result, Micron requests that the Court consider the following in its review of UMC's plea agreement:

- Lift the Stay in Micron's Civil Case. UMC's plea agreement fails to provide restitution to Micron, leaving that remedy to Micron's civil lawsuit (Northern District of California Case No. 3:17-CV-06932-MMC) which has been stayed for over fifteen months. If the Court is inclined to accept UMC's plea, Micron respectfully requests that the Court lift the stay in the civil case immediately.
- Allow for Swift Award of Restitution to Micron. Once the stay is lifted, the Court should expedite the proceedings to allow Micron to present its case and be made whole as soon as possible.

In sum, Micron welcomes UMC's guilty plea and commitment to provide ongoing substantial assistance to the government as a small step toward redress. Measured against the magnitude of UMC's misconduct, the fine is a modest and incomplete penalty. Much more must be done – and hopefully soon – to right UMC's wrongs.

Very truly yours,



Joel L. Poppen
Senior Vice President, Legal Affairs,
General Counsel and Corporate Secretary

cc: Assistant United States Attorney Laura Vartain Horn